



10 045265

OFFICIAL

COFC

CERTIFICATE OF MAILING			
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:			
Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450			
Name (Print/Type)	Rose A. Lubich		
Signature	Rose A. Lubich	Date	9-24-04

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: US 6,793,804 B1

Issued: September 21, 2004

Inventor(s): David A. Lindsay, Gary R. Brierley, Tom N. Kalnes

Title: INTEGRATED HYDROTREATING PROCESS FOR THE DUAL PRODUCTION OF
FCC TREATED FEED AND AN ULTRA LOW SULFUR DIESEL STREAMREQUEST FOR CERTIFICATE OF CORRECTION OF PATENT FOR PTO MISTAKE (37 CFR 1.322(a))

Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The above-designated patent issued with the following errors.

In claim 10: In column 9, line 8, "seam" should be replaced with "stream."

In accord with the requirements of the "Expedited Issuance of Certificates of Correction When the Error is Attributable to the United States Patent and Trademark Office" (Official Gazette, September 17, 2002), Patentee encloses a copy of the claims as filed on November 7, 2001, in which the subject claim appears correctly.

It is believed that the enclosed documentation unequivocally supports Patentee's assertion that the error incurred through the fault of the PTO. Therefore, the requirements for expedited issuance of the Certificate of Correction are met.

Attached is Form PTO-1050. It is believed that no fee is required.

Respectfully submitted,

UOP LLC

John G. Cutts, Jr., Attorney for Applicant
Reg. No. 27,866
(847) 391-3146 (phone)
(847) 391-2387 (fax)

Certificate
OCT 04 2004
of Correction

JGC:sb

OCT 05 2004

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

PATENT NO.: US 6,793,804 B1

DATED: September 21, 2004

INVENTORS: David A. Lindsay, Gary R. Brierley, Tom N. Kalnes

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The above-designated patent issued with the following error:

In claim 10: In column 9, line 8, "seam" should be replaced with "stream."

MAILING ADDRESS OF SENDER:

PATENT NO. US 6,793,804 B1

JOHN G. TOLOMEI
UOP LLC
25 EAST ALGONQUIN ROAD
DES PLAINES, ILLINOIS 60017-5017

No. of add'l copies
@ 30¢ per page
→ 0

OCT 05 2004

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

PATENT NO.: US 6,793,804 B1

DATED: September 21, 2004

INVENTORS: David A. Lindsay, Gary R. Brierley, Tom N. Kalnes

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The above-designated patent issued with the following error:

In claim 10: In column 9, line 8, "seam" should be replaced with "stream."

MAILING ADDRESS OF SENDER:

PATENT NO. US 6,793,804 B1

JOHN G. TOLOMEI
UOP LLC
25 EAST ALGONQUIN ROAD
DES PLAINES, ILLINOIS 60017-5017

No. of add'l copies
@ 30¢ per page
→ 0

OCT 05 2004

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

PATENT NO.: US 6,793,804 B1

DATED: September 21, 2004

INVENTORS: David A. Lindsay, Gary R. Brierley, Tom N. Kalnes

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The above-designated patent issued with the following error:

In claim 10: In column 9, line 8, "seam" should be replaced with "stream."

MAILING ADDRESS OF SENDER:

PATENT NO. US 6,793,804 B1

JOHN G. TOLOMEI
UOP LLC
25 EAST ALGONQUIN ROAD
DES PLAINES, ILLINOIS 60017-5017

No. of add'l copies
@ 30¢ per page
→ 0

OCT 05 2004

WHAT IS CLAIMED IS:

1. An integrated hydrotreating process for the treating of FCC feed to achieve low sulfur specifications in FCC gasoline and the production of an ultra low sulfur diesel stream which process comprises:

- 5 a) passing a first hydrocarbonaceous feedstock and hydrogen to a first denitrification and desulfurization reaction zone operated at reaction zone conditions including a temperature from about 204° to 482°C (400° to 900°F) and a pressure from about 3.6 to 17.3 MPa (500 to 2500 psig) with a catalyst and recovering a denitrification and desulfurization reaction zone effluent therefrom;
- 10 b) passing the denitrification and desulfurization reaction zone effluent to a high pressure stripper maintained at a temperature from about 149° to 454°C (300° to 850°F) to produce a first vapor stream and a first liquid stream;
- 15 c) passing at least a portion of the first vapor stream and a second feedstock comprising diesel boiling range hydrocarbons to a second denitrification and desulfurization reaction zone to produce a second liquid stream comprising reduced sulfur content, diesel boiling range hydrocarbons and a hydrogen-rich gaseous stream containing hydrogen sulfide; and
- 20 d) passing the hydrogen-rich gaseous stream containing hydrogen sulfide to an acid gas scrubbing zone to produce a hydrogen-rich gaseous stream having a reduced concentration of hydrogen sulfide; and

- e) passing at least a portion of the hydrogen-rich gaseous stream having a reduced concentration of hydrogen sulfide to the high pressure stripper and the first denitrification and desulfurization reaction zone.
2. The process of Claim 1 wherein at least a portion of the first liquid stream is
- 5 passed to at least one vapor-liquid separator to produce a third liquid stream containing reduced sulfur content and hydrocarbons boiling above the diesel boiling range.
3. The process of Claim 1 wherein the second denitrification and desulfurization reaction zone is operated at reaction zone conditions including a temperature from about 204° to 482°C (400° to 900°F) and a pressure from about 3.6 to 17.3 MPa (500 to 2500
- 10 psig).
4. The process of Claim 1 wherein a majority of the first hydrocarbonaceous feedstock boils in the range from about 232° to 566°C (450° to 1050°F).
5. The process of Claim 1 wherein a majority of the second hydrocarbonaceous feedstock boils in the range from about 204°C to about 343°C (400°F-650°F).
- 15 6. The process of Claim 1 wherein the hydrogen introduced into the high pressure stripper contains less than about 50 volume ppm hydrogen sulfide.
7. The process of Claim 1 wherein the second liquid stream comprising reduced sulfur content, diesel boiling range hydrocarbons contains less than about 50 wppm sulfur.
- 20 8. The process of claim 2 wherein the third liquid stream containing reduced sulfur content and hydrocarbons boiling above the diesel range is suitable for a feedstock to a fluid catalytic cracking unit.

9. The process of Claim 1 wherein the acid gas scrubbing zone utilizes an aqueous amine scrubbing solution.

10. An integrated hydrotreating process for the production of a low sulfur diesel stream which process comprises:

- 5 a) passing a first hydrocarbonaceous feedstock and hydrogen to a first denitrification and desulfurization reaction zone operated at reaction zone conditions including a temperature from about 204° to 482°C (400° to 900°F) and a pressure from about 3.6 to 17.3 MPa (500 to 2500 psig) with a catalyst and recovering a denitrification and desulfurization reaction zone effluent therefrom;
- 10 b) passing the denitrification and desulfurization reaction zone effluent to a high pressure stripper maintained at a temperature from about 149° to 454°C (300° to 850°F) to produce a first vapor stream and a first liquid stream;
- 15 c) passing at least a portion of the first vapor stream and a second feedstock comprising diesel boiling range hydrocarbons to a second denitrification and desulfurization reaction zone to produce a second liquid stream comprising reduced sulfur content, diesel boiling range hydrocarbons and a hydrogen-rich gaseous stream containing hydrogen sulfide;
- 20 d) passing the hydrogen-rich gaseous stream containing hydrogen sulfide to an acid gas scrubbing zone to produce a hydrogen-rich gaseous stream having a reduced concentration of hydrogen sulfide; and

- e) passing at least a portion of the hydrogen-rich gaseous stream having a reduced concentration of hydrogen sulfide to the high pressure stripper and the first denitrification and desulfurization reaction zone.